



The process controller Codix 565 with totaliser function displays V and mA analogue input signals in high resolution. In addition it can monitor and control 2 limit values.

These fast displays set new standards when it comes to user friendliness. Their easy-to-read 14-segment LED display, easy-to-understand running help texts and a practical quick-start guide eliminate the need to wade through time-consuming full instruction manuals.

NEW: with optional analogue output

DC 10 ... 30 V	AC 90 ... 260 V	A.Z* 6 LEDs	Prog	mA, V	Tara	Σ	mA V	min / max	2	AC/DC
Power supply		14-segment LED display	Menu-driven programming	Display linearization	Tare function	Totaliser-Function	Input	Min / Max value detection	2 limit values	Galvanic isolation
15 bit	-20°...+65°C	000000 DIN 96 x 48	000000	Hand	mA, V					
Resolution	Temperature range	DIN front bezel	Installation in mosaic systems	Operation with gloves	Analogue output optional					

User-friendly

- Practical quick-start guide for setting the parameters and operating the device
- Help text as running text
- Easy-to-read 14-segment LED display, 6 digits 14 mm [0.55] high
- Simple programming via 4 keys on the front
- One front key as well as 2 additional inputs can be programmed for specific applications
- Customer-specific characteristic (linearization) curve via 12 control points for all measurement signal inputs
- MIN/MAX memory function, individually resettable

Powerful

- Sampling rate of 10 readings per second
- Time-controlled totaliser function for totalising the measured values. Can be reset separately.
- 2 relay outputs (changeover contacts) for limit monitoring with hysteresis and ON/OFF delay function for current measured or totaliser values
- Analogue output for the current measured value, MIN-value, MAX-value or totalizer value
- Auxiliary sensor power supply 15 V DC / 25 mA, also for 2-wire transmitters
- Inputs and outputs galvanically isolated
- Digital filter (first-order) for smoothing display fluctuation with unstable input signals
- Tare function

Order code

6.56 5 . 0 1 0 . X 0 X
a b c d

- a** Input type
5 = Analogue input signal ¹⁾
- b** Outputs
0 = relays ¹⁾
- c** Power supply
0 = 90 ... 260 V AC ¹⁾
3 = 10 ... 30 V DC ¹⁾
- d** Further outputs (optional)
0 = none ¹⁾
9 = analogue output
(only for DC version)

- Delivery specification:**
- Process device
 - Mounting clip
 - Gasket
 - Instruction manual, multilingual
 - 1 sheet of self-adhesive symbols
 - Quick-start guide

Practical quick-start guide for setting the parameters and operating the device. The guide can be affixed directly to the front of the unit and can be removed and re-applied as required.



¹⁾ Stock types

Process controllers

LED process controllers For analogue input signals (AC+DC) Codix 565

Accessories	Dimensions in mm [inch]	Order-No.
Mounting frame with cut-out 92 x 45 [3.62 x 1.77]	For snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 96 x 48 [3.74 x 1.89]	grey G300005

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

Technical data

General technical data	
Display	6-digit, 14 segment LED
Digit height	14 mm [0.55"]
Display range	-199999 ... 999999, with leading zero blanking
Data retention	> 10 years, EEPROM
Operation	5 keys
Operating temperature	-20°C ... +65°C [-4°F ... +149°F] (non-condensing)
Storage temperature	-25°C ... +75°C [-13°F ... +167°F]
Relative humidity (non-condensing)	R.H. 93 % at +40°C [+104°F]
Altitude	up to 2000 m [6562']

Electrical characteristics		
Power supply	AC supply	90 ... 260 V AC / max. 9 VA 50 / 60 Hz
	DC supply	10 ... 30 V DC / max. 3.8 W with galvanic isolation and reverse polarity protection ext. fuse protection: T 0.4 A
Mains hum suppression		50 Hz or 60 Hz programmable
Sensor power supply	AC supply	24 V DC ± 15 %, 30 mA
	DC supply	15 V DC ± 1 %, 25 mA
EMC	Emitted interference	EN 55011 class B
	Immunity to interference	EN 61000-6-2 with shielded signal and control cables
Device safety	Designed to Protection class Application area	EN 61010 part 1 2 Pollution level 2

Mechanical characteristics	
Housing	Panel mount housing to DIN 43700, RAL 7021
Dimensions	96 x 48 x 102 mm [3.78 x 1.89 x 4.02"]
Panel cut-out	92 +0.8 x 45 +0.6 mm [3.62 +0.032 x 1.77 +0.024"]
Installation depth	approx. 92 mm [3.62"] incl. terminals
Weight	approx. 180 g [6.34 oz] with analogue output 200 g [7.06 oz]
Protection	IP65 (front side)
Housing material	Polycarbonate UL94 V-2
Vibration resistance	acc. to EN 60068-2-6 10 - 55 Hz / 1 mm / XYZ 30 min in each direction
Shock resistance	acc. to EN 60068-2-27 100G / XYZ 3 times in each direction acc. to EN 60068-2-29 10G / 6 ms / XYZ 2000 times in each direction
Connections	
Power supply and outputs	Plug-in screw terminal, 8-pin, RM 5.00, core ø max. 2.5 mm² [AWG 13]
Signal and control inputs	Plug-in screw terminal, 9-pin, RM 3.50, core ø max. 1.5 mm² [AWG 15]

Measuring signal inputs	
Sampling rate	10 readings/sec
Voltage input	
Input signal	0 ... 10 V, 2 ... 10 V, ± 10 V
Measuring range	-10.5 ... +10.5 V
Resolution	< 0.4 mV (±15 bit)
Measuring accuracy at 23°C [73°F] (% of range)	typ. 0.02 % / max. ≤ 0.05 %
Temperature drift	< 100 ppm / K
Input resistance	1 MΩ
Max. voltage	± 30 V
Current input	
Input signal	0 ... 20 mA, 4 ... 20 mA
Measuring range	-0.5 ... 21 mA
Resolution	1 µA (> 14 bit)
Measuring accuracy at 23°C [73°F] (% of range)	typ. 0.02 % / max. ≤ 0.05 %
Temperature drift	< 100 ppm / K
Input resistance	22 Ω + PTC 25 Ω
Voltage drop	approx. 1.8 V at 20 mA
Max. current	60 mA

Control inputs MPI 1 / MPI 2	
Quantity	2 optocouplers
Function	programmable
Switching levels	LOW HIGH
	< 2 V > 4 V (max. 30 V)
Pulse length	> 100 ms

Process
devices

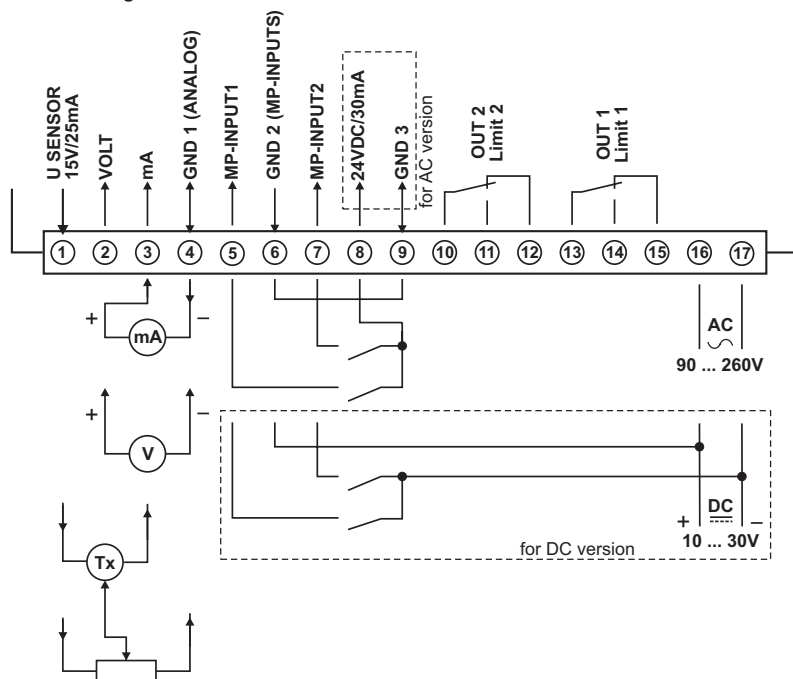
Process controllers

LED process controllers For analogue input signals (AC+DC) Codix 565

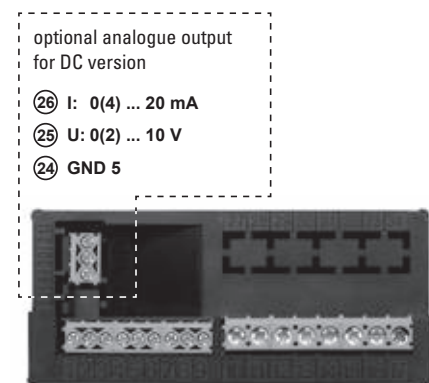
Alarm outputs	
Relays	changeover contacts
Switching voltage	max. 250 V AC / 125 V DC min. 5 V AC / 5 V DC
Switching current	max. 5 A AC / 5 A DC min. 10 mA DC
Switching capacity	max. 1250 VA / 150 W

Analogue output (optional - only for DC version)	
Output ranges	0 (4) ... 20 mA / 0 (2) ... 10 V
Load	current output $\leq 500 \Omega$ voltage output $\geq 2000 \Omega$
Resolution	15 bit
Update time (basic device measuring rate)	100 ms
Temperature drift	≤ 100 ppm/K
Accuracy	$\pm 0.1\%$ of the output range high value
Output ripple	≤ 10 mV
Isolation voltage	500 V AC for 1 minute or 1 kV DC for 1 second

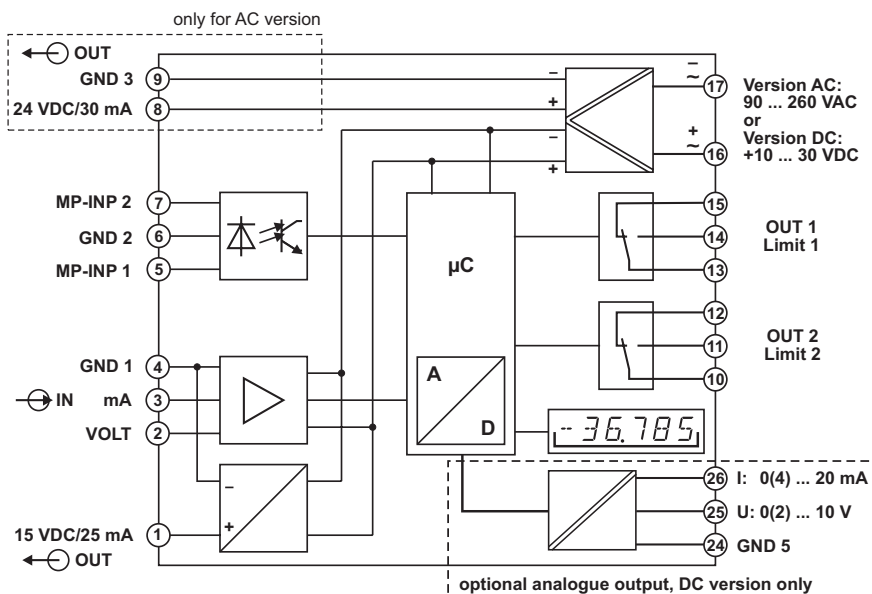
Terminal assignment



Rear side view



Block diagram



Process controllers

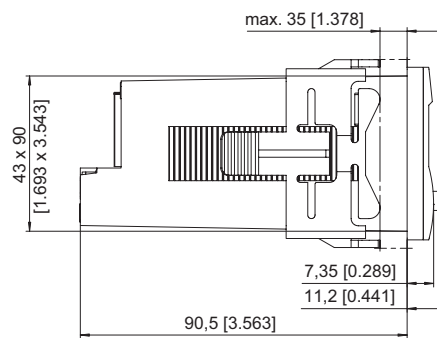
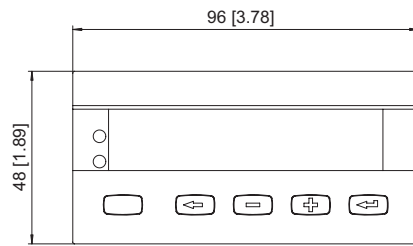
LED process controllers	For analogue input signals (AC+DC)	Codix 565
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Dimensions

Dimensions in mm [inch]

Panel cut-out

92^{+0.8} x 45^{+0.6}
 [3.62^{+0.032} x 1.77^{+0.024}]



Process controllers

LED process controllers

2 analogue signal inputs + 2 limit values or analogue output

573



The process controller with 2 analogue inputs can be used in both single channel mode as well as in dual channel. In dual channel mode, all arithmetic operations are available for displaying the sum total, difference, ratio or the product. Inputs and outputs can be scaled separately.

Can be used as a simple process signal converter, process controller (ON/OFF controller) or for complex measuring tasks, where the relationship between two values, one to the other, must be monitored, calculated or further processed in a higher-level controller.

AC/DC 17 ... 260 V Power supply	000000 DIN 96 x 48 DIN front bezel	IP65 High protection level	Prog Menu-driven programming	Glove Operation with gloves	mA, V 2 inputs	123... 6 LED LED display	Tara Tare function	mA, V Output	2 Transistor output
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Innovative

- 2 separate freely scalable analogue inputs +/-10 V, 0 ... 10 V and 0/4 ... 20 mA, resolution 14 bit
- Tare function – the unit can be set to 0 for any input voltage
- Programmable linearization: with up to 16 control points, input via key-pad or via the teach-in function
- Averaging measurement over 2 to 16 measuring cycles, for use with serious fluctuations of the input signals
- Easy to programme - the desired display value is simply keyed-in for a specific input signal
- Fast 25 ms sampling rate per channel alternating

Compact and multifunctional

- Up to 3 display values in one device, display A, display B + display calculated based on A and B
- AC and DC power supply in one device
- Simple menu-driven programming with just 2 keys, as well as tare or teach-in key
- Can be used as a simple process signal converter, process controller (ON/OFF controller) or for complex measuring tasks where the relationship between two values, one to the other, must be monitored, calculated or further processed in a higher-level controller
- Mathematical operation of the measured values of inputs A and B. The result can also if required be multiplied, divided or added to an offset value, in order to obtain the desired display value.
- Analogue output 0/4 ... 20 mA, +/-10 V or 0 ... 10 V
- 2 fast PNP switching outputs, 50 ms, with switching hysteresis, step or tracking preset
- Programmable display refresh time

Order specifications

Process controller with 2 outputs

6.573.011.E00 ¹⁾

Delivery specifications

Process controller with analogue output

6.573.012.E90 ¹⁾

- Process controller 573
- Gasket
- Mounting kit
- Manual German/English

Accessories

Dimensions in mm [inch]

Order-No.

Mounting frame

with cut-out 92 x 45 [3.62 x 1.77]

For snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 96 x 48 [3.74 x 1.89]

grey

G300005

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

¹⁾ Stock types

Process controllers

LED process controllers **2 analogue signal inputs + 2 limit values or analogue output** **573**

Technical data

General technical data	
Display	LED display, 15 mm [0.59"] high 6 decades
Operating temperature	0°C ... +45°C [+32°F ... +113°F] (non-condensing)
Storage temperature	-25°C ... +70°C [-13°F ... +158°F]

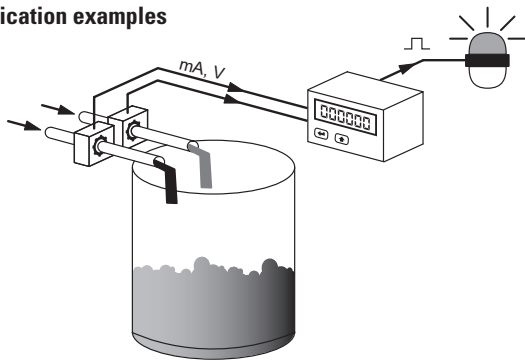
Electrical characteristics	
Power supply	17 ... 30 V DC (Nominal voltage: 24 V DC) 115/230 V AC ± 12.5 %
Current consumption	18 V 110 mA 24 V 90 mA 30 V 80 mA
Power consumption AC	7.5 VA
Auxiliary power supply output for sensors (for AC and DC supply)	24 V DC ± 15%, 100 mA
EMC	Immunity to interference EN 55011 class B Emitted interference EN 61000-6-2
Device safety	Designed to EN 61010 part 1 Protection class 2 Application area Pollution level 2

Mechanical characteristics	
Housing	Noryl UL94-V-0
Weight	approx. 200 g [7.05 oz]
Protection	IP65 (front side) IP20 (rear side)
Connection terminals	signal max. 1.5 mm ² [AWG 15] AC supply max. 2.5 mm ² [AWG 13]

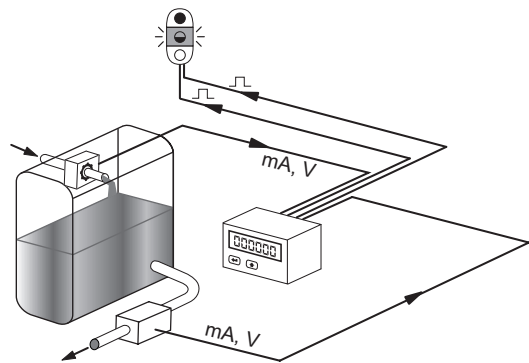
Measuring signal inputs	
2 analogue inputs	0 ... 20 mA, 4 ... 20 mA -10 ... +10 V, 0 ... 10 V
Input resistance	current Ri = 100 Ohm voltage Ri = 30 kOhm
Measuring time per channel	25 ms (alternating)
Resolution	14 bit (13 bit + sign)
Accuracy	±0.1% ± 1 digit

Outputs	
Switching outputs	2 x PNP, max. 35 V, max. 150 mA response time max. 50 ms
Analogue output	0 ... 20 mA, 4 ... 20 mA (max. 300 Ohm) -10 ... +10 V, 0 ... 10 V (max. 2 mA) response time max. 57 ms (analogue output 7 ms after detection of the measurement value)
Resolution	14 bit (13 bit + sign)

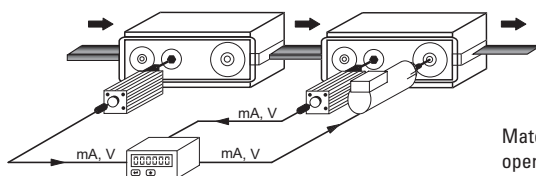
Application examples



Monitoring of mixing ratios and display of flow rate



Level monitoring and adjustment, display of inflow and outflow



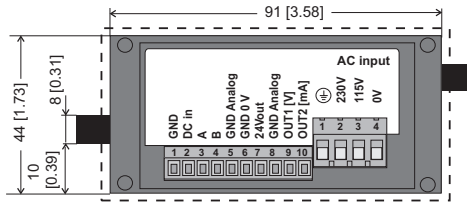
Material stretching, as well as monitoring of synchronous operation, with display of individual speeds

Process controllers

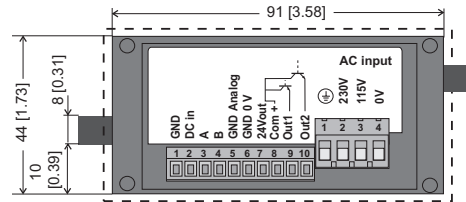
LED process controllers 2 analogue signal inputs + 2 limit values or analogue output 573

Terminal assignment

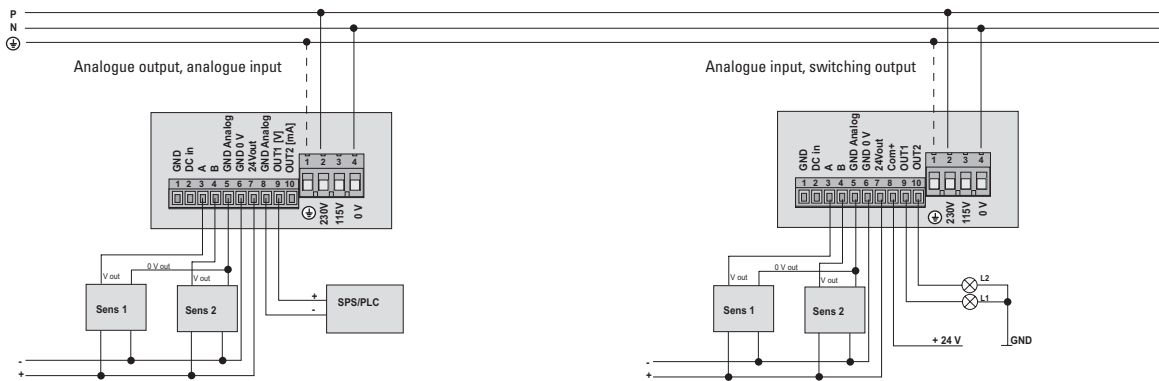
with analogue output



with 2 outputs

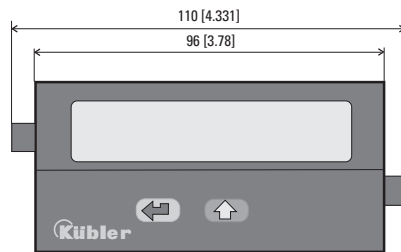


Connection example

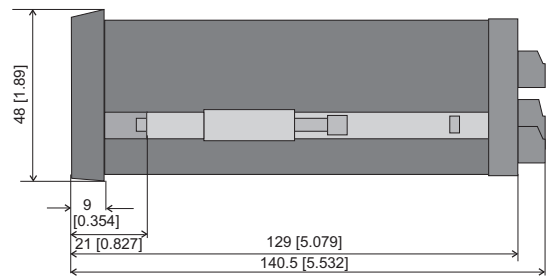


Dimensions

Dimensions in mm [inch]



Panel cut-out 91 x 44 [3.58 x 1.73]



Setpoint adjuster

LED setpoint adjuster **Analogue signal output for mA or V, also time-controlled (DC)** **Codix 533**



The setpoint adjuster Codix 533 triggers a standard analogue signal or a freely programmable signal sequence from 0 ... 12 V or from 0 ... 24 mA.

The setpoint adjuster is a real innovation, opening up new application potentials in process technology and automation.



DIN 96 x 48	4 LED	DC 10 ... 30 V	Menu-driven programming	IP65	-20° + 65°	mA, V	AC/DC
DIN front bezel	LED display	Power supply	Menu-driven programming	High protection level	Temperature range	Output	Galvanic isolation

Innovative

- Function of a digital time controller with analogue output
- Manual functions with direct input or stepped incremental output of the setpoint
- 4-digit, 8 mm high top-quality LED display
- Physical variables output / 0 ... 12 V or 0 ... 24 mA analogue signals
- Units of display can be freely programmed and displayed – no conversion of the specified output value required
- Ideal for simulation runs without the need for expensive, time-consuming running-in of processes

Powerful

- Simpler to run processes than with a PLC or process controller
- Everything can be programmed easily by means of 2 keys and the text menu
- Digital setting - no additional DIP switches or potentiometers
- Display allows simple monitoring of the specified setpoint output
- User-friendly display form as direct digital value
- 3 separate functions integrated as standard in the Codix 533
- High accuracy of < 0.2% of the final value

Order specifications

Setpoint adjuster	6.533.012.300 ¹⁾	Delivery specification – Setpoint adjuster – Mounting clip / Gasket – Instruction manual, multilingual – 1 set of self-adhesive symbols	– Front bezel for screw mounting (T008181) 56 x 40 mm [2.20 x 1.57"], panel cut-out 50 x 25 mm [1.97 x 0.98"] – Front bezel for clip mounting (T008180) 53 x 28 mm [2.09 x 1.10"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
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Accessories	Dimensions in mm [inch]	Order-No.
Adapter front bezel, 72 x 36 [2.83 x 1.42]	For cut-out 68 x 33 [2.68 x 1.30] to cut-out 45 x 22.2 [1.77 x 0.87], for counters 48 x 24 [1.89 x 0.94], as set black and silver anodised	162704 Set
Adapter front bezel, 48 x 48 [1.89 x 1.89]	For cut-out 45 x 45 [1.77 x 1.77] to cut-out 45 x 22.2 [1.77 x 0.87], with clip mounting for counters 48 x 24 [1.89 x 0.94] black	T008883
Adapter front bezel, 60 x 50 [2.36 x 1.97]	For cut-out 54 x 29 [2.13 x 1.14] to cut-out 45 x 22.2 [1.77 x 0.87], with screw mounting and gasket for counters 48 x 24 [1.89 x 0.94] black	N003001
Transparent cover, lockable, IP65	For cut-out 54 x 29 [2.13 x 1.14], for screw mounting to front bezel F1B or adapter front bezel N003001, for counters with cut-out 50 x 25 [1.97 x 0.98] or 45 x 22.2 [1.77 x 0.87]	N003002
Sealing cover type K1, IP65	Suitable for front bezel 60 x 50 [2.36 x 1.97], for screw mounting of electromech. counters and via adapter front bezel N003001 for counters 48 x 24 [1.89 x 0.94]	G008301
Mounting frame with cut-out 50 x 25 [2.36 x 1.97] via separate adapter also for 45 x 22.2 [1.77 x 0.87]	For snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 53 x 28 [2.09 x 1.10] and via separate adapter (T008180) for counters 48 x 24 [1.89 x 0.94] chromated	G300004

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

1) Stock types

Setpoint adjuster

LED setpoint adjuster Analogue signal output for mA or V, also time-controlled (DC) Codix 533

Technical data

General technical data	
Display	4 digits, red 7 segment LED display; 8 mm [0.32"] high
Data backup	EEPROM
Operating temperature	-20°C ... +65°C [-4°F ... +149°F] (non-condensing)
Storage temperature	-25°C ... +85°C [-13°F ... +185°F]

Mechanical characteristics	
Housing	front panel mount 48x24 mm [1.89 x 0.94"] acc. to DIN 43700; RAL 7021, dark grey
Protection	IP65 (front side)
Weight	approx. 50 g [1.76 oz]
Connections	screw terminal, pitch 5.08 mm [2"], 7 pin

Electrical characteristics	
Power supply	10...30 VDC, galvanically isolated with integrated reverse polarity protection
Power consumption	max. 1 W
Test voltage	500 V, 50 Hz, 1 min.
EMC	Emitted interference EN 55011 class B Immunity to interference EN 61000-6-2
Device safety	Designed to EN 61010 part 1 Protection class 2 Application area Pollution level 2

General information about the measuring inputs	
Current output	0 ... 24 mA, increment 10 µA load 20 mA: ≤ 500 Ohm > 20 mA: ≤ 400 Ohm
Voltage output	0 ... 12 V, increment 10 mV load ≥ 2 kOhm
Control input	HIGH 4 ... 30 V DC Hold (HIGH active) LOW 0 ... 2 V DC
Accuracy	< 0.2% of the full scale value ±0.02 %/K

3 operating modes programmable

Manual direct input (Setp)

- Fast adjustment and manual approach to the desired setpoint value.
- Setpoint value can be specified directly during operation via the keys in V or mA.
- Output of the value 3 seconds after the last key actuation.

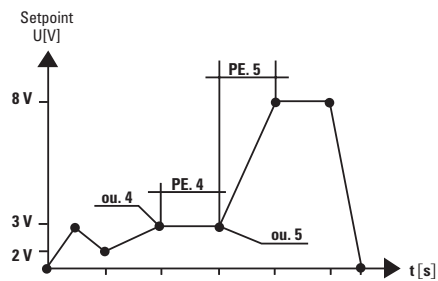
Manual ramping function (Man)

- Possibility of a stepped, incremental approach to the desired setpoint value using the keys on the front.
- Input of the minimum and maximum setpoint values and the increment by key actuation in the programming level.
- During operation the device starts with the minimum setpoint value – the right key is used to increase the value by the amount of the increment; the left key decreases the value.
- The programmed maximum value cannot be exceeded.

Automatic ramping function (Auto)

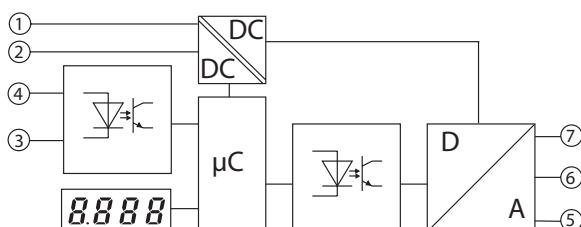
- Function of a digital time based controller with analogue output. Setpoint values can be programmed and carried out for process sequences, either cyclic or time dependent: irrigating, dosing, lubricating, filling, venting, mixing.
- With max. 20 current or voltage values.
- Cyclically limited (time) or unlimited.

Example of an automatic ramping function



Example with 8 points	
ou. 1	0 V
PE 1	5 s
ou.2	3 V
PE 2	5 s
ou. 3	2 V
PE 3	10 s
ou. 4	3 V
PE 4	10 s
ou. 5	3 V
PE 5	10 s
ou. 6	8 V
PE 6	10 s
ou. 7	8 V
PE 7	10 s
ou. 8	0 V
PE 8	5 s

Block diagram



Inputs

1	2	3	4
10 ... 30 V DC	GND_1	GND_2	Hold

Outputs

5	6	7
0 ... 24 mA (Iout)	GND_3	0 ... 12 V DC (Uout)

Setpoint adjuster

LED setpoint adjuster **Analogue signal output for mA or V, also time-controlled (DC)** **Codix 533**

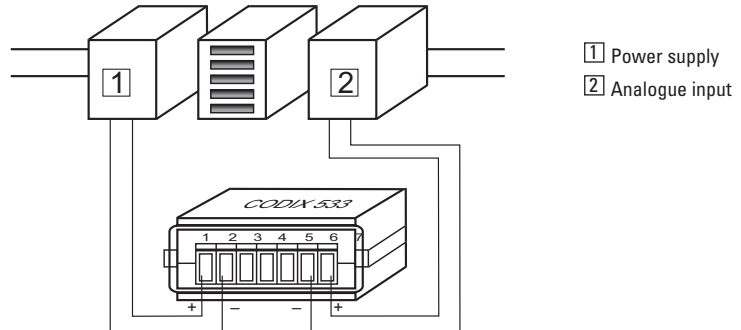
Terminal assignment

Inputs

1	2	3	4
10 ... 30 V DC	GND_1	GND_2	Hold

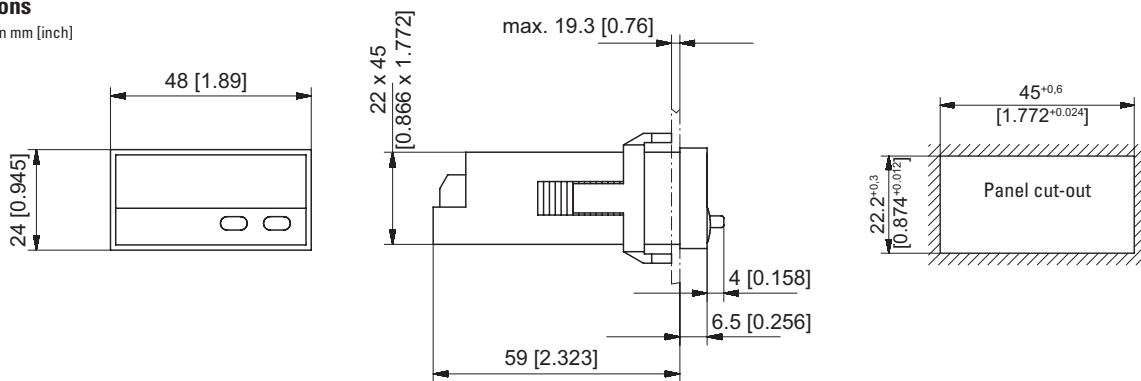
Outputs

5	6	7
0 ... 24 mA	Analogue GND_3	0 ... 12 V DC

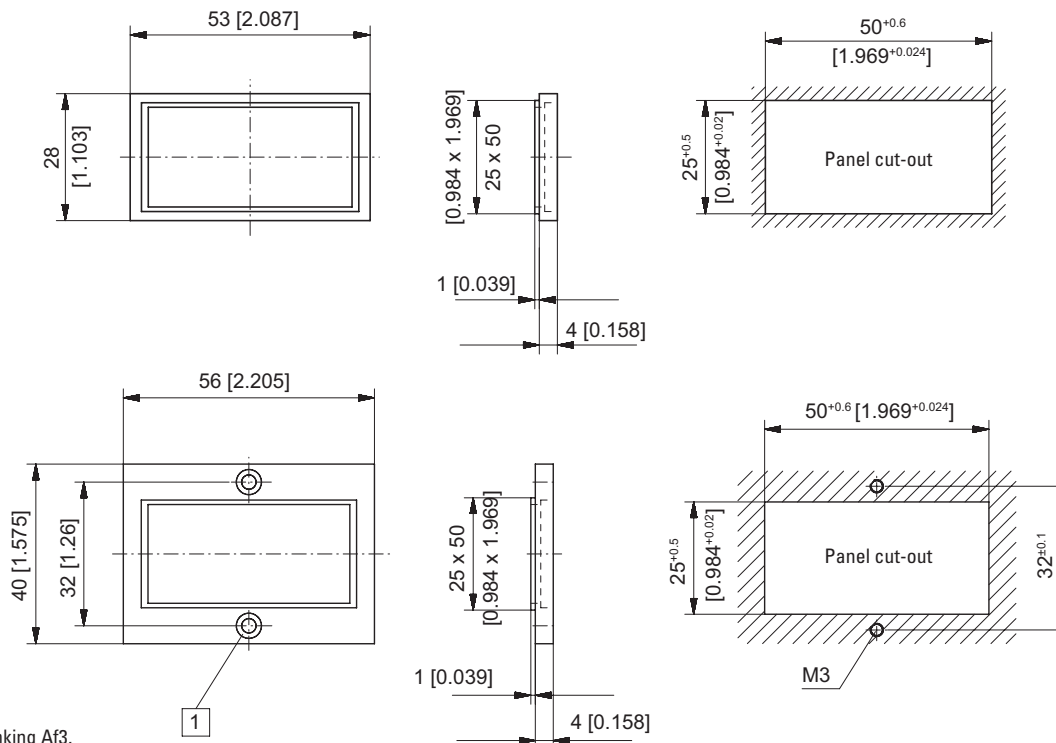


Dimensions

Dimensions in mm [inch]



Front bezel



1 Countersinking Af3, DIN 74

Setpoint adjuster

LED setpoint adjuster

Analogue signal output for mA or V, also time-controlled (DC)

Codix 533

Areas of application / Applications

**Simple control (fixed installation)
in plants, machines and devices**

Time-based ramping up or down of:

**For use in set-up mode
of plants, machines and devices**

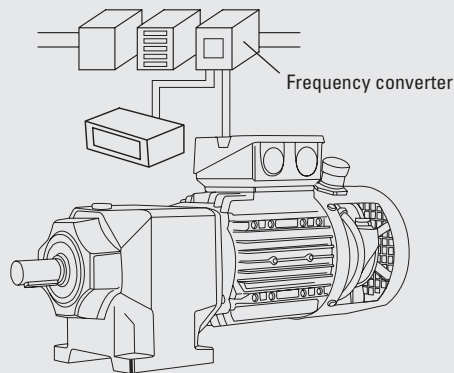
Manual (direct) specification or time-based or manual setting
(ramping up or down) of:

Rotary speeds (e.g. frequency converter), flow rates, temperatures, positions, pressure and fill levels.
In short: all physical quantities that can be represented with analogue standard signals.

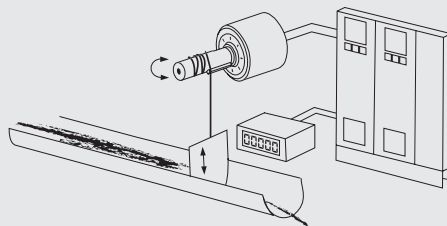
Applications

Simple time controller with analogue signal output

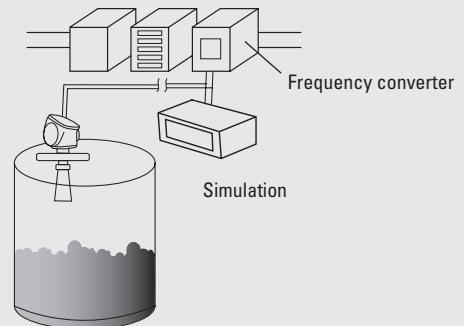
Commissioning, running-in processes or rotary speed control of motors through setpoint setting.



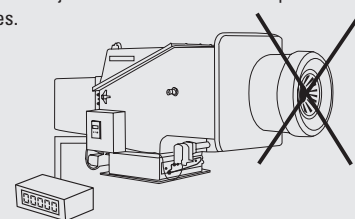
Control of simple, time-based processes by means of an analogue signal, e.g. ramping control for locks and sluices



Calibration of filling levels and flow rates: the setpoint adjuster simulates the output signals of a level or flow sensor for configuring a control.



Alignment for temperature-based processes without having to heat up the plant: the setpoint adjuster can simulate various processes for test purposes.



Solution with different modes

2 operating modes are provided for that purpose:

- Manual ramping function
- Automatic ramping function

The following operating modes are provided for that purpose:

- Manual direct input
- Manual ramping function
- Automatic ramping function

Advantages

Instead of using an expensive, complex and difficult-to-use PLC, our setpoint adjuster can handle this task as a standalone device. The user saves costs and the task can be performed in a flexible and quick way, even without any prior knowledge.

The setpoint adjuster simulates the sensor signal that is read by the physical process, e.g. the rise of the temperature, the filling of tank plants. Expensive and complex running-in of processes can be replaced with the simulation performed by the setpoint adjuster.

The output signal can be displayed directly or scaled in any desired unit.
The user always sees the exact progress.
An easy-to-use device with three selectable modes is available.

Setpoint adjuster

Strain-gauge controllers



Strain-gauge controllers

Strain-gauge controllers		Type	Page
LED strain-gauge controllers	For strain-gauge inputs	Codix 566 	294

Strain-gauge controllers

LED strain-gauge controllers For strain-gauge inputs (AC+DC) Codix 566

Accessories	Dimensions in mm [inch]	Order-No.
Mounting frame with cut-out 92 x 45 [3.62 x 1.77]	For snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 96 x 48 [3.74 x 1.89]	grey G300005

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

General technical data	
Display	6-digit, 14 segment LED
Digit height	14 mm [0.55"]
Display range	-199999 ... 999999, with leading zero blanking
Data retention	> 10 years, EEPROM
Operation	5 keys
Operating temperature	-20°C ... +65°C [-4°F ... +149°F] (non-condensing)
Storage temperature	-25°C ... +75°C [-13°F ... +167°F]
Relative humidity (non-condensing)	R.H. 93 % at +40°C [+104°F]
Altitude	up to 2000 m [6562']

Mechanical characteristics	
Housing	Panel mount housing to DIN 43700, RAL 7021
Dimensions	96 x 48 x 102 mm [3.78 x 1.89 x 4.02"]
Panel cut-out	92 +0.8 x 45 +0.6 mm [3.62 +0.032 x 1.77 +0.024"]
Installation depth	approx. 92 mm [3.62"] incl. terminals
Weight	approx. 180 g [6.34 oz] with analogue output 200 g [7.06 oz]
Protection	IP65 (front side)
Housing material	Polycarbonate UL94 V-2
Vibration resistance	acc. to EN 60068-2-6 10 - 55 Hz / 1 mm / XYZ 30 min in each direction
Shock resistance	acc. to EN 60068-2-27 100G / XYZ 3 times in each direction acc. to EN 60068-2-29 10G / 6 ms / XYZ 2000 times in each direction
Connections	
Power supply and outputs	Plug-in screw terminal, 8-pin, RM 5.00, core ø max. 2.5 mm ² [AWG 13]
Signal and control inputs	Plug-in screw terminal, 9-pin, RM 3.50, core ø max. 1.5 mm ² [AWG 15]

Electrical characteristics		
Power supply	AC supply	90 ... 260 V AC / max. 9 VA 50 / 60 Hz ext. fuse protection: T 0.1 A
	DC supply	10 ... 30 V DC / max. 3.8 W with galvanic isolation and reverse polarity protection ext. fuse protection: T 0.4 A
Mains hum suppression		50 Hz or 60 Hz programmable
Sensor power supply	AC supply	24 V DC ±15 %, 30 mA
	DC supply	10 V DC ± 1%, 30 mA 10 V DC ± 1%, 30 mA
EMC	Emitted interference	EN 55011 class B
	Immunity to interference	EN 61000-6-2 with shielded signal and control cables
Device safety	Designed to	EN 61010 part 1
	Protection class	2
	Application area	Pollution level 2

Control inputs MPI 1 / MPI 2		
Quantity	2 optocouplers	
Function	programmable	
Switching levels	LOW	< 2 V
	HIGH	> 4 V (max. 30 V)
Pulse length	> 100 ms	

Strain-gauge measuring signal inputs	
Sampling rate	10 readings/sec
Input resistance	1 MΩ
Max. measuring signal range	approx. ± 35 mV
Max. voltage	± 10 V
Sensitivity ranges: 3.3 – 3.0 – 2.0 mV / V	
Resolution	± 15 bit
Measuring accuracy at 23°C (% of range)	typ. 0.05 % / max. ≤ 0.1 %
Temperature drift	< 100 ppm/K _{Ambient}
Sensitivity ranges: 1.5 – 1.0 mV / V	
Resolution	± 14 bit
Measuring accuracy at 23°C (% of range)	typ. 0.1 % / max. ≤ 0.2 %
Temperature drift	< 100 ppm/K _{Ambient}

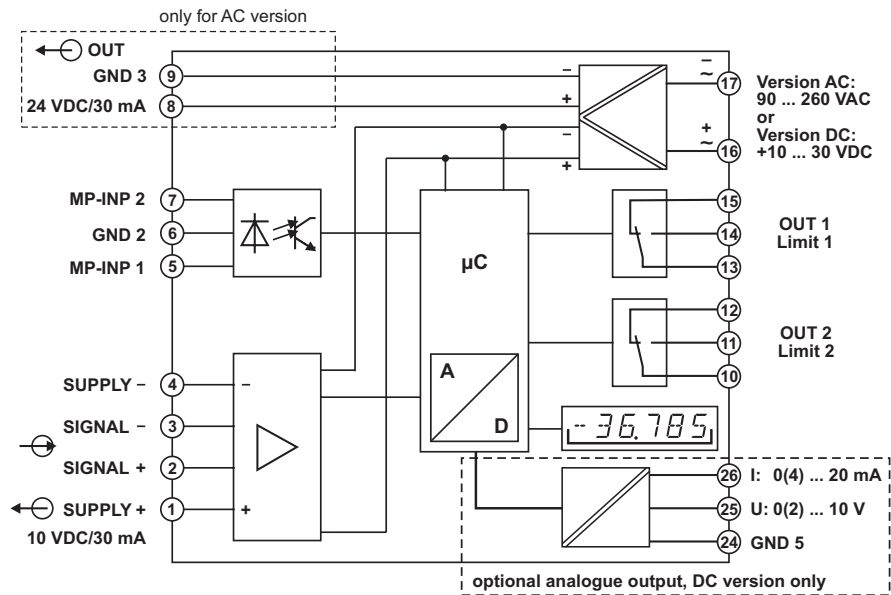
Strain-gauge controllers

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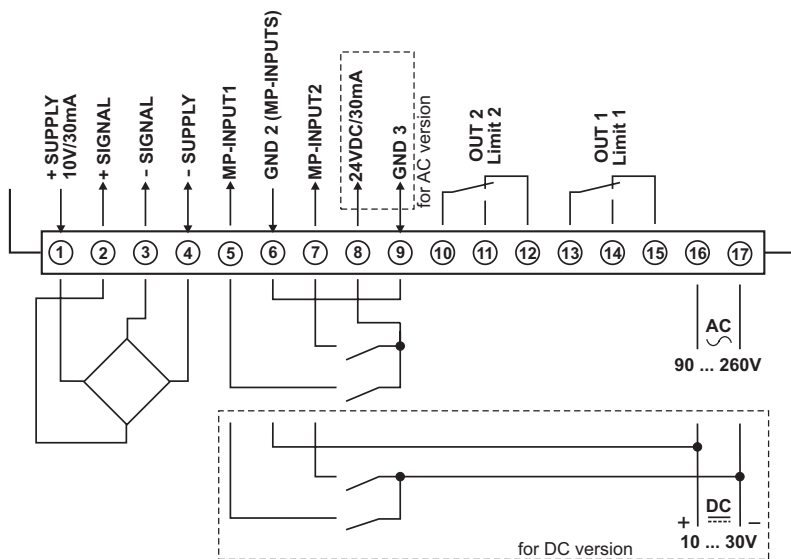
Alarm outputs	
Relays	changeover contacts
Switching voltage	max. 250 V AC / 125 V DC min. 5 V AC / 5 V DC
Switching current	max. 5 A AC / 5 A DC min. 10 mA DC
Switching capacity	max. 1250 VA / 150 W
Pull-in time	approx. 10 ms

Analogue output (optional - only for DC version)	
Output ranges	0 (4) ... 20 mA / 0 (2) ... 10 V
Load	current output $\leq 500 \Omega$ voltage output $\geq 2000 \Omega$
Resolution	15 bit
Update time (basic device measuring rate)	100 ms
Temperature drift	$\leq 100 \text{ ppm/K}_{\text{Ambient}}$
Accuracy	$\pm 0.1\%$ of the output range high value
Output ripple	$\leq 10 \text{ mV}$
Isolation voltage	500 V AC for 1 minute or 1 kV DC for 1 second

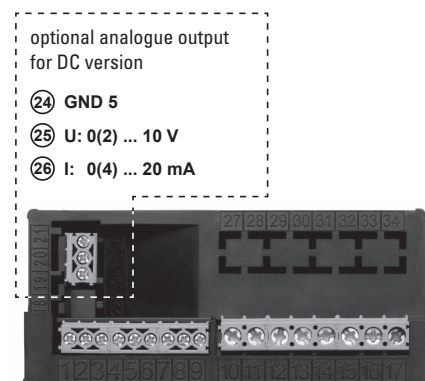
Block diagram



Terminal assignment



Rear side view



Strain-gauge controllers

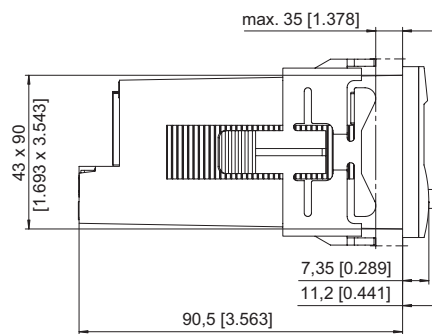
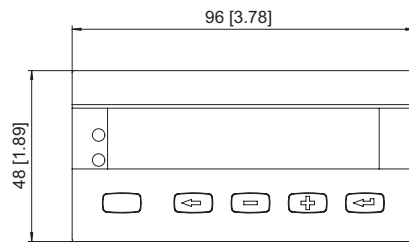
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Dimensions

Dimensions in mm [inch]

Panel cut-out

$92^{+0.8} \times 45^{+0.6}$
 $[3.62^{+0.032} \times 1.77^{+0.024}]$



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